

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 24

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CHARLES STACK

Appeal No. 2001-2051
Application 08/923,293¹

ON BRIEF

Before THOMAS, BARRETT, and GROSS, Administrative Patent Judges.
BARRETT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the final rejection of claims 1-16.

We affirm-in-part.

¹ Application for patent filed September 4, 1997, entitled "System and Method for Providing Recommendation of Goods or Services Based on Recorded Purchasing History."

BACKGROUND

The invention relates to a system, method, and computer program product for providing recommendations of goods and/or services of potential interest to customers based upon the customer's selection of other goods and/or services, in conjunction with a database of the purchasing history of other customers of the merchant. For example, if a user selects a specific book that he or she is interested in purchasing, the system searches the database to determine all previous customers who have purchased that book and, if those previous customers have also purchased other books in common, the books will be displayed. A common example today, although not known to this panel to be prior art to the present application, is found on websites such as "www.barnesandnoble.com" where selection of a book results in information on the book and a list of books under the heading of "People who bought this book also bought:."

Claim 16 is reproduced below.

16. A computer program product having a computer readable medium having computer readable code recorded thereon for the recommendation of goods or services in response to user input, comprising:

input means for receiving user commands representing any of a plurality of goods or services to be used as filter data;

database storage means for the retention of data concerning goods or services purchase decisions of prior users; and

means for filtering said database storage means using said inputted user commands to obtain recommendations to a user based on said inputted user commands.

The examiner relies on the following references:

Robinson	5,790,426	August 4, 1998 (filed April 30, 1997)
Payton	5,790,935	August 4, 1998 (filed January 30, 1996)

Claims 1-16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Robinson and Payton.

We refer to the final rejection (Paper No. 14) (pages referred to as "FR__") and the examiner's answer (Paper No. 21) (pages referred to as "EA__") for a statement of the examiner's rejection, and to the brief (Paper No. 20) (pages referred to as "Br__") and reply brief (Paper No. 22) (pages referred to as "RBr__") for a statement of appellant's arguments thereagainst.

OPINION

Grouping of claims

Appellant states that the claims are grouped to stand or fall together (Br5) and appears to argue mainly the limitations of independent claim 1. We find the limitations of the independent claims to be too different to be treated the same. Hence, we address the independent claims separately.

The references

Robinson discloses an automated collaborative filtering (ACF) system for recommending an item to a first user based on

ratings of items by other system users (col. 1, lines 53-56). The items may be any product or service that can be rated by a user (col. 3, lines 24-27). The improvement involves determining a similarity in preference of the user as compared to other users, which is used to determine a subgroup of users having preferences similar to the first user, and the ratings of the subgroup of users are then used to recommend an item to the first user (abstract; col. 6, lines 29-35). In order to determine a similarity value, the first user and other user must have ratings in the database for at least one common item (col. 6, lines 25-27 & 38-41). The users in Robinson are required to actively participate by entering their subjective ratings of items in the group, in contrast to the disclosed invention which uses previous customer activity history to reduce the degree of customer input in prior art systems (specification, p. 2, lines 6-16).

Payton is directed to a virtual on-demand information system (such as for movies, games, computer applications) wherein the information is downloaded to a storage device at the subscriber during non-peak hours based on an information filtering system that predicts items the subscriber might like, and therefore request. A subscriber database stores a subscriber profile which includes a rating vector in which the user subscriber has rated each of the items he or she has previously requested (col. 5, lines 6-12). Alternatively, the system could just record the use

of a requested item as a positive vote (col. 6, lines 41-42). A collaborative filtering system acts on the subscriber profiles and predicts which of the available items the subscriber may be interested in and request, and produces a list of those recommended items for each subscriber (col. 5, lines 12-16). A number of different collaborative filtering algorithms may be used (col. 9, lines 4-61).

Analysis

The examiner finds that "Robinson does not expressly disclose a database containing information pertaining to goods and/or services purchasing history of previous customers, but Payton teaches a database of ratings by previous customers (column 5, lines 6-10)" (FR2; EA4). Appellant notes that the final rejection acknowledges that Robinson does not disclose the claimed database of customer purchase history (Br8). The examiner responds that although Robinson does not expressly disclose such a database (EA9):

Robinson discloses the use of a database pertaining to the goods and/or services of previous users; since the previous users would in many cases have purchased the movies, books, or other goods and services they rated, Robinson's data in fact would pertain to their purchasing history, contrary to Appellant's assertion. Examiner wishes to note that "pertain" is a broad word, and that independent claims 1 and 7 specify only "information pertaining to goods and/or services purchasing history," without limitations to detailed information on which prior users have purchased which goods and/or services.

Appellant argues that the examiner's reasoning is contradictory, but, in any event, the combination does not disclose using the specification of a good/service as filter data for a previous customer purchase history database (RBr3).

We find that Robinson does not disclose a database storing "information pertaining to goods and/or services purchasing history of previous customers" (claims 1 and 7) or "data concerning goods or services purchase decisions of prior users" (claim 16). Robinson is a recommendation service, not a sales service, and, therefore, it does not teach maintaining purchasing history. The examiner's reasoning that "pertaining to ... purchase history" is broad enough to read on the users' ratings of items in Robinson because, indirectly, the users had to have purchased the items somewhere, is not necessary since Payton expressly discloses that the ratings can be based on requested (purchased) items. We conclude it would have been obvious to one skilled in the art that the ratings in Robinson could be based on request (purchase) history in view of Payton.

The examiner finds that "Robinson discloses receiving customer commands specifying a particular good or service to be used as filter data (column 6, lines 24-35; see also column 6, line 56, through column 7, line 46)" (FR2; EA3; see also EA10). Appellant argues that these passages deal with procedures for determining the proper subgroup of users (RBr1) and have "nothing

to do with entering a specified item as filter data for obtaining recommendations of other goods and/or services from a previous customer purchasing history database, as set forth in the claims on appeal" (RBr2) and that there is no "user input" of a specified item in Robinson (RBr2).

The examiner does not particularly point out what description in Robinson is relied on as the customer commands. The only thing we see that can possibly be the customer commands are the ratings that the first user enters into the database at step 60 (col. 6, lines 25-27 & 38-41), which ratings form the basis for the recommendations. Payton also contains the same teachings about the subscriber rating each of the items he or she has previously requested (col. 5, lines 6-12), which ratings form the basis for the recommendation. However, these ratings do not satisfy the claim language of claims 1 and 7.

Claim 1 recites "specifying a particular good or service to be used as filter data." While the ratings in Robinson and Payton are used as filter data for a recommendation, the ratings do not specify of a particular good or service to be used as filter data for a recommendation. That is, the user does not specify a particular good or service, such as specifying the book Clear and Present Danger in appellant's example of Fig. 3D, which is then used as filter data to get a recommendation. The user gets a recommendation based on past ratings without specifying a

particular good or service. Therefore, the rejection of claim 1 and its dependent claims 2-6 is reversed.

Claim 7 recites, inter alia, an operator interface for inputting requests for "the purchase of goods or services," "means for processing inputted requests and for filtering relevant history information regarding said inputted requests from said database," and "whereby goods and/or services identification information corresponding to goods and/or services purchased by previous customers who have purchased the goods and/or services requested by said potential customers are transmitted to said operator interface for use by said potential customers" (emphasis added). This requires filtering the purchasing history of previous customers based on "the goods and/or services requested by said potential customers," which we interpret to be equivalent to "specifying a particular good or service to be used as filter data," as recited in claim 1. As we found with respect to claim 1, neither Robinson nor Payton discloses specifying a particular good or service to be used as filter data for a recommendation. Therefore, the rejection of claim 7 and its dependent claims 8-15 is reversed.

Claim 16 is broader than claims 1 and 7 and, we conclude, would have been obvious over Robinson and Payton. The limitation of "input means for receiving user commands representing any of a plurality of goods or services to be used as filter data" is

broad enough to read on the input means for inputting ratings in Robinson and Payton, where the rated goods or services are used as filter data. Note that this limitation of claim 16 does not require "specifying a particular good or service to be used as filter data," as recited in claim 1, or filtering the purchasing history of previous customers based on "the goods and/or services requested by said potential customers," as recited in claim 7. Thus, claim 16 does not capture the idea of using a specified good or service as a filter for obtaining recommendations of other goods and services. Payton discloses "database storage means for the retention of data concerning goods or services purchase decisions of prior users" because it stores a database of subscriber profile rating vectors which vectors contain data concerning items which the user subscriber has previously requested (col. 5, lines 6-12), where requested information (such as a pay-per-view movie) is purchased information, and the ratings can be based on the use of a requested item (col. 6, lines 41-42), i.e., the ratings directly reflect purchase (request) decisions of previous users. For this reason, we disagree with appellant's argument that "neither Robinson nor Payton disclose a database of previous customer purchase history, as required by the claims on appeal" (RB2). It would have been obvious to one of ordinary skill in the art that the recommendation system in Robinson could be applied in a purchase

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(request)/recommendation system as taught by Payton, although Robinson does not appear to be necessary to the rejection. The limitation of "means for filtering said database storage means using said inputted user commands to obtain recommendations to a user based on said inputted user commands" reads on the recommendation systems of Robinson and Payton. For these reasons, the rejection of claim 16 is sustained.

CONCLUSION

The rejection of claims 1-15 is reversed. The rejection of claim 16 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

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